

Appendix A) Description of Physician Demographic and Practice Characteristic Indicators		
Indicator	Description	Definition of indicator
<i>Sex</i>		
Male	Physician sex	Male sex
Female		Female sex
<i>Age</i>	Physician age	Physician age in 2014
<i>HDI Group</i>		
Very high	2013 Human development index associated with the country of undergraduate medical school of physician (26)	HDI rank < 50
High		HDI rank $\geq 50$ and < 103
Medium		HDI rank $\geq 103$ and < 145
Low		HDI rank $\geq 145$
<i>Practice Type</i>		
Comprehensive	Comprehensive practice is if majority of services billed are related to “core primary care” and span multiple practice areas (27)	$\geq 44$ days worked/yr and > 50% of billing “in core primary care” in at least 7 of 22 practice areas
Other		All other FM physicians
<i>Group type</i>		
FHT	Family Health Team, group practice but not-Family Health Team or solo practice	
non-FHT		
No group		
<i>Rurality</i>		
Urban	Practice location categorized in to urban or suburban/rural based on 2008 Rurality Index for Ontario (RIO) score (50)	RIO < 10
Suburban/Rural		RIO $\geq 10$
<i>Scope of practice</i>		
Prenatal visits	If the physician submitted billing for care related to: prenatal	% with any billing

<i>Obstetrical Delivery</i>	visits, obstetrical delivery, postnatal visits, Emergency	% with any billing
<i>Postnatal visits</i>	Department, or Long-Term Care	% with any billing
<i>ED visits</i>		% with any billing
<i>LTC visits</i>		% with any billing
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<i>Patient age distribution</i>		
<i>&lt; 18 years</i>		< 18 years
<i>18-64 years</i>	Pts age categories in 2014	18-64 years
<i>65+ years</i>		65+ years
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<i>Patient SES</i>		
<i>% low income</i>	Number of pts in the bottom 40% of neighborhood income	< 3 <sup>rd</sup> quintile of neighborhood income
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HDI: Human Development Index   FM: Family Medicine   FHT: Family Health Team  RIO: Rurality Index of Ontario  ED: Emergency Department   LTC: Long-Term Care   Pts: patients   SES: Socio-Economic Status		

## Appendix B) Description of Primary Care Quality Indicators

Indicator	Population	Description/guideline	Definition of indicator
<i>Diabetes</i>			
<i>HbA1c</i>		Every 3-6 months, depending on control (51)	2+ HbA1c in previous 12 months
<i>Eye exam</i>		Examination every 1-2 years, depending on severity (51)	Eye exam in previous 24 months
<i>Lipids</i>	Pts with Diabetes Mellitus	Total cholesterol, HDL-C, LDL-C, and TGs annually (51)	1+ cholesterol test in previous 12 months
<i>ACE/ARB</i>		Indicated for pts with high cardiovascular risk (51)	Prescribed ACE/ARB in previous 12 months (pts 65 years of age or older)
<i>Statin</i>		Indicated for pts with elevated lipids (51)	Prescribed statin in previous 12 months (pts 65 years of age or older)
<i>CHF</i>			
<i>Echocardiogram w/in 12 mths of diagnosis</i>	Pts with newly diagnosed CHF	Recommended early after CHF diagnosis for assessment and management (52)	Echocardiogram ordered within 12 months of diagnosis
<i>ED visits/person</i>	Pts with CHF		All cause ED visit in 2014/15
<i>COPD</i>			
<i>Spirometry w/in 12 mths of diagnosis</i>	Pts with newly diagnosed COPD	Recommended for diagnosis (37)	Spirometry within 12 months of diagnosis
<i>ED visits/person</i>	Pts with COPD	All COPD pts, number of ED visits/year	All cause ED visit in 2014/15

<i>Asthma</i>			
<i>Spirometry</i>		Recommended to be reassessed regularly and used for diagnosis (53)	Ever had spirometry
<i>ED visits/person</i>	Pts with asthma	All asthma pts number of ED visits/year	All cause ED visit in 2014/15
<i>Preventive Pediatric Care</i>			
<i>Well-baby visits</i>	Pts < 2yrs		Number of visits in first 24 months
<i>18-month enhanced well baby visit</i>	Pts 18 months	Recommended for every child in Ontario (32)	Submitted 18 month billing code
<i>No Immunization</i>	Pts < 2yrs	Publicly funded routine immunizations for children in first 2 yrs (54)	Submitted no billing codes for DTAP, Pneumococcal, MenCC, MMR, Varicella
<i>Cancer Screening</i>			
<i>Mammogram</i>	Female pts 52-69 yrs (excluding breast cancer pts)	Recommended every 2-3 years for pts 50-69 (55)	Mammogram in previous 24 months
<i>Pap test</i>	Female pts 23-69 yrs (excluding cervical and endometrial cancer pts)		Pap in previous 36 months
<i>All colon cancer screening</i>	Pts 52-74 yrs (excluding colon cancer and IBD pts)	FOBT recommended every 1-2 yrs; Colonoscopy every 10 yrs; Flexible Sigmoidoscopy and Double Contrast Barium Enema every 5years for pts 50-74	Any FOBT in previous 2 yrs; colonoscopy in previous 10 yrs; other in previous 5 yrs

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*Hospital Readmissions**Readmission (30 days)*

Hospital readmission within 30 days

All hospitalized pts

*Readmission (1 yr)*Hospital readmission within 12  
months

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HbA1c: Haemoglobin A1c (Glycated Haemoglobin) | pts: patients | HDL-C: High-Density Lipoprotein Cholesterol | LDL-C: Low-Density Lipoprotein Cholesterol | TG: Triglycerides | ACE/AARB: Angiotensin Converting Enzyme Inhibitors/ Angiotensin II Receptor Blockers | CHF: Congestive Heart Failure | ED: Emergency Department | COPD: Chronic Obstructive Pulmonary Disease | DTAP: Diphtheria, Tetanus, Pertussis, Polio | MenCC: Meningococcal Conjugate C | MMR: Measles, Mumps, Rubella | Pap test: Papanicolaou test | IBD: Inflammatory Bowel Disease | endo: FOBT: Fecal Occult Blood Test

### Appendix C) Unadjusted mean numbers or percentages, clinical practice measures

	TLPs		Out-of-Province ALPs		US-Trained ALPs		Canadian-Trained ALPs	
	mean % or #	95% CL	mean % or #	95% CL	mean % or #	95% CL	mean % or #	95% CL
<b>Diabetes</b>								
<i>HbA1C</i>	43.4	(43, 43.9)	41.8	(37.6, 46)	48.0	(44.3, 51.6)	45.4	(41.8, 49)
<i>Eye exam</i>	66.2	(65.9, 66.6)	63.1	(59.3, 66.8)	67.3	(64.2, 70.3)	67.3	(64, 70.7)
<i>Lipids test</i>	62.4	(61.9, 62.9)	67.6	(63.4, 71.9)	72.9	(68.8, 77)	64.1	(59.8, 68.5)
<i>Ace/AARB</i>	70.2	(69.8, 70.6)	71.8	(67.3, 76.2)	74.5	(71.2, 77.7)	70.2	(66.5, 74)
<i>Statin</i>	69.5	(69.2, 69.9)	68.6	(63.5, 73.8)	75.8	(73.5, 78.1)	69.8	(66.5, 73.2)
<b>CHF</b>								
<i>Echo w/in 12 mths of dx</i>	85.3	(84.7, 85.9)	83.1	(74.5, 91.7)	91.5	(87.9, 95.1)	85.6	(79.8, 91.5)
<b>COPD</b>								
<i>Spiro w/in 12 mths of dx</i>	78.1	(77.6, 78.7)	72.9	(65.1, 80.7)	77.3	(71.7, 83)	79.0	(74.1, 83.8)
<b>Asthma</b>								
<i>Any spirometry</i>	51.7	(51.3, 52.1)	49.4	(45.3, 53.5)	52.0	(48.8, 55.3)	50.7	(47.6, 53.8)
<b>CHF, COPD or Asthma</b>								
<i>ED visits/person</i>	0.82	(0.79, 0.85)	0.68	(0.58, 0.77)	0.65	(0.58, 0.72)	0.87	(0.76, 0.99)
<b>Pediatric care</b>								
<i>Well baby visits (mean #)</i>	5.2	(5.2, 5.3)	4.3	(3.8, 4.9)	5.0	(4.5, 5.4)	4.8	(4.4, 5.2)
<i>18 month enhanced assessment</i>	47.9	(47.1, 48.6)	32.8	(25.8, 39.8)	47.7	(41, 54.4)	47.4	(42, 52.8)
<i>No immunization</i>	16.9	(16.2, 17.5)	23.6	(16.3, 30.9)	12.0	(8, 16)	16.4	(11.2, 21.6)
<b>Cancer screening</b>								

<i>Mammogram</i>	58.2	(57.8, 58.7)	51.0	(46.2, 55.8)	59.1	(55.1, 63.1)	55.0	(50.9, 59.1)
<i>Pap test (3 yrs)</i>	56.4	(56, 56.8)	50.7	(46.5, 54.8)	57.5	(53.1, 62)	55.8	(52.6, 59.1)
<i>Any colon cancer screening</i>	55.5	(55.1, 56)	48.7	(43.8, 53.6)	54.6	(50.1, 59)	56.8	(53.3, 60.3)
<b>Hospital readmissions</b>								
<i>30 day</i>	0.18	(0.18, 0.18)	0.14	(0.11, 0.18)	0.15	(0.13, 0.17)	0.19	(0.16, 0.23)
<i>1 yr</i>	0.06	(0.06, 0.06)	0.05	(0.03, 0.06)	0.05	(0.04, 0.06)	0.07	(0.05, 0.09)

HbA1c: Haemoglobin A1c (Glycated Haemoglobin) | ACE/AARB: Angiotensin Converting Enzyme Inhibitors/ Angiotensin II | CL: Confidence Limit | CHF: Congestive Heart Failure | dx: diagnosis | COPD: Chronic Obstructive Pulmonary Disease | ED: Emergency Department | Pap test: Papanicolaou test | CA: Cancer